

30 JUL 74

(DATE)

## MEMORANDUM FOR THE RECORD

SUBJECT: Opinion Request - Water Resources

Attached is self-explanatory material from the Department of State.  
May we have your opinion by 16AUG74.

Please state degree of interest and whether we will receive requirements.



(IMAGE)

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## COMMENTS:

\*DOI Waiver Letter In ERU FILE\*

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Answered  
16 Jul 74

Water Resources

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(Comment)

STATINTL

RECORD  
OF  
U.S.-U.S.S.R. COORDINATORS MEETING ON  
PROJECT III.2, "METHODS AND MEANS OF AUTOMATION  
AND REMOTE CONTROL IN WATER RESOURCE SYSTEMS"

Washington, D. C., USA

June 28, 1974

I

In accordance with the U.S.-U.S.S.R. Agreement on Cooperation in the Fields of Science and Technology, signed May 24, 1972, and the Results of Discussions of the first meeting of the U.S.-U.S.S.R. Joint Working Group on Scientific and Technical Cooperation in the Field of Water Resources signed September 30, 1972, the meeting of U.S.-U.S.S.R. Coordinators was held in Denver, Colorado, on June 26-27, 1974, on Project III.2, "Methods and Means of Automation and Remote Control in Water Resource Systems."

Project coordinators who headed the U.S.-U.S.S.R. parties:

The U.S.S.R. Party:

O. A. Bilik  
Director of the All-Union Scientific Research  
Institute of Integrated Automation of  
Reclamation Systems

The U.S. Party:

E. F. Sullivan  
Assistant Commissioner - Resource Management  
Bureau of Reclamation

The list of participants is attached (Appendix No. 1).

The following items were under discussion:

1. Coordination of the General Joint Program on the project for the period of cooperation
2. A detailed program to be executed during the first stage of cooperation for the period of 1974-76

3. Preliminary itinerary for the visit of U.S. Group to the U.S.S.R. in September 1974

II

1. As a result of exchange of opinions and information on the activities executed in each country in the field of automation of water resource systems, the two Parties have discussed forms and topics of cooperation and are considering as a basis the proposals by the U.S.S.R. side for a Joint Program of Works to be executed on the project (Appendix No. 2) during the period of cooperation, as well as a Detailed Program of Works to be carried out during the first stage of cooperation (Appendix No. 3). These programs may be subject to change or supplement after the visit of the U.S. side to the U.S.S.R.
2. The Parties have agreed upon the necessity of mutual preliminary coordination, in more suitable forms for every particular case, of stage priority of works to be executed according to Scientific and Technical Cooperation Program.
3. The preliminary itinerary for the visit of the U.S. Group to the U.S.S.R. in September 1974 has been discussed and agreed upon (Appendix No. 4). It will be corrected and specified as well as sent to the U.S. Party 1 month prior to the Group's departure for the U.S.S.R.
4. The U.S.S.R. Group has been acquainted with the work of some of the water economy organizations and firms, as well as of some technical solutions at a number of big projects and visited the following organizations and project sites:

Nebraska automated gated-pipe irrigation system  
near Grand Island

Central Nebraska Public Power and Irrigation District  
automated canal and supervisory control center

University of Nebraska North Platte Experimental  
Station

Federal and state water resource features in Central  
Valley Basin, California

California Aqueduct and Westlands Water District

USDA/ARS automation research at Palo Verde  
Irrigation District

Salt River Project

Bureau of Reclamation Engineering and Research  
Center Laboratories and data processing  
facilities

5. It is believed by the Coordinators that financing of all activities associated with the Joint Works provided by the program be realized in accordance with the decisions adopted by the U.S.-U.S.S.R. Joint Commission on Scientific and Technical Cooperation.
6. The Project Coordinators and the participants of this joint meeting state with satisfaction that the talks were fruitful and held in the atmosphere of friendship and mutual understanding and originated the beginning of personal contacts that will contribute to further development and extension of cooperation in the field of automation and remote control in water resource systems.

The present Memorandum was signed on June 28, 1974, in two copies, Russian and English, both copies being equally valid.

*O. A. Bilik*  
O. A. Bilik  
Project Coordinator  
The U.S.S.R. Side

*E F Sullivan*  
E. F. Sullivan  
Project Coordinator  
The U.S. Side

June 16-27, 1974

Appendix No. 1

List of Participants at  
Coordinator Meeting of U.S.-U.S.S.R. Sides  
on  
Project III.2, "Methods and Means of Automation  
and Remote Control in Water Resource Systems"

U.S.S.R. Party

O. A. Bilik, Theme Coordinator  
Director, All-Union Scientific Research Institute of  
Integrated Automation of Reclamation Systems  
Frunze 720052  
Kirgiz

D. D. Koslov, Chief Specialist of Automatic and Power  
Supply Department  
"Sojuzvodproject"  
Moscow

V. I. Kurotchenko, Chief of Technical Cybernetics Laboratory  
KSSR Academy of Science  
Institute of Automatics  
Frunze

I. B. Khamadov, Chief of Operational Hydrometry and Hydraulic  
Automatics with Sector A.C.S.  
Middle Asia Research Institute of Irrigation named after  
V. D. Jurin  
Tashkent

U.S. Party

E. F. Sullivan, U.S. Project Coordinator  
Assistant Commissioner - Resource Management  
Bureau of Reclamation  
Washington, D. C. 20240

Reid Teebles, Associate General Manager - Water  
Salt River Valley Water Users Association  
Post Office Box 1980  
Phoenix, Arizona 85001

List of Participants - continued

U.S. Party

R. D. Dirmeyer, General Manager  
Central Nebraska Public Power and Irrigation District  
Holdrege, Nebraska 68949

Professor P. E. Fischbach  
University of Nebraska  
Room 214  
Agricultural Engineering Building  
Lincoln, Nebraska 68503

Leonard J. Erie  
Agricultural Research Service  
U.S. Department of Agriculture  
Water Conservation Laboratory  
4331 East Broadway  
Phoenix, Arizona 85040

Charles A. Calhoun, Team Leader  
Water Systems Automation  
Division of Water Operation and Maintenance  
Bureau of Reclamation  
Engineering and Research Center  
Denver, Colorado 80225

Program of USSR-US Working Group on Scientific and Technical Cooperation in the Field of Water Resources

Project III-2 "Methods and Means of Automation and Remote Control in Water Resource Systems"

No.	Description	Activities at each item or phase	Executor in the USSR	Executor in the USA	Completion period	Expected Results
		3	4	5	6	7
1	Design methods of automated systems to control technological processes in water projects including on-farm systems	Joint research on development and Pilot operation of predictor-mined experimental projects.	VNIKA reclamation; USSR Ministry of Land Reclamation and Water Management. Inst. of Automation, Kyrgyz SSR Academy of Sciences	The US side will provide the names of its executors at a later time.	1980	Automated experimental projects; recommendations of design and operation
1.1	Analysis and selection of experimental projects	Agreement of experimental Projects selected during visits of USSR-US specialists in USA (June 1974) and USSR (September 1974)	Coordinator	Footnote: The US side will provide the names of its executors at a later time.	1974	Protocol
1.2	Scientific substantiation and preparation of assignment for design activities	Joint development of requirements to be met by control system, substantiation of assessment criteria, concepts, and algorithms for control, information and technical schemes, main requirements for program and technical facilities.	VNIKA reclamation; Soyuzvodoproekt, Inst. of Automation Kyrgyz SSR Academy of Sciences	Report or scientific substantiation, protocol on technical assignment approval	1975	

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1	2	3	4	5	6	7
1.3	Preparation of technical project and drawings	Agreement and exchange of technical information	Design institute	1976	Technical Project and drawings	
1.4	Construction, assembly, and check-up	Activities at experimental projects and exchange of consultations	Construction and assembly organizations of USSR Ministry of Land Reclamation and Water Management	1977	Acceptance Acts.	
1.5	Provision of tests at experimental project	Joint team	VNIKA Reclamation; Soyuzvodproekt VNIKA Reclamation	1978	Report on tests provision	
	Recommendations on design and operation	Agreement and exchange of technical information		1979	Protocol on recommendations approved	
2	Complex of technical and program facilities for automated systems development to control technological processes in water projects, including on-farm systems	Joint research to develop and use new and existing complexes of technical and program facilities, their meteorological provision and pilot operation	VNIKA Reclamation; Inst. of Automation, Kirghiz SSR Academy of Sciences; Gosstandard; Minpriroda	1979	Complexes of technical facilities, and recommendations on their use	

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Protocol on technical requirements approved

	1	2	3	4	5	6	7
2.1	Specification of technological parameters to be measured, controlled, and regulated.	Joint development of requirements	VNIKA reclamation; Soyuzvodproekt, Inst. of Automation, Kirghiz SSR Academy of Sciences	1975	Protocol on technical requirements approved		
	Preparation of technical requirements on means for data collecting, transmitting, and automated processing; preparation of requirements on control facilities for technological processes.						
2.2	Analysis of existing control and management facilities, and local automated systems as well	Exchange of technical information	VNIKA reclamation; Soyuzvodproekt; SANIIRI	1975	Catalogs of control and management facilities for industries		
2.3	Development of design methods, manufacturing and delivery of pilot automated control facilities to experimental projects; retrological provision.	Joint design and delivery to experimental projects.	VNIKA reclamation; Inst. of Automation, Kirghiz SSR Academy of Sciences; Minpriro	1976	Act of pilot equipment tested		
2.4	Operation of pilot automated facilities on experimental projects, recommendations on automated facilities application and utilization.	Joint team	VNIKA reclamation	1977-1978	Protocol on recommendations approved		

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1	2	3	4	5	6	7
3	Complex of technical facilities to provide scientific and metrological research necessary to develop automated control systems for technological processes in water projects	Exchange of information, technical materials, devices	Gosstandard, Minpriro; VNIKA reclamation	1975-1976	Scientific report and data on metrological provision	
4	Personal training for developing and operating automated control systems for technological processes in water projects	Exchange of training programs, manuals, preparation of English-Russian glossary.	VNIKA reclamation; NCMI; TINISX Kirovsk SHI	1976	Protocol of training program and glossary approved.	

Footnote: The US side will provide the names of its executors at a later time.

Appendix No. 3

PROGRAM OF WORKS

To be executed during the first stage of cooperation on Project III.2, "Methods and Means of Automation and Remote Control in Water Resource Systems"

Analysis and selection of experimental projects for mutual research, development and establishment of technical requirements for the automation means.

The Coordinators agreed that it would be expedient to create experimental irrigation systems in both countries.

The final objective for the creation of experimental projects for mutual research is to select and develop, as well as to test experimentally, a complex of technical and program means aimed at providing optimum control of technological processes in automatic irrigation systems of different types. This work should include the development of recommendations on design and operation of similar systems.

Taking into account various natural and design features, the projects must be typical from a technological point of view and located in a more typical and perspective area of farming under irrigation as well as include all the main technological processes.

For the purpose of implementation of works associated with the creation of experimental projects, both sides agreed with the following:

During the period of July-August 1974, the U.S.S.R. Party is to prepare the necessary technological and technical documentation on the selected project and to supply all the data to the U.S. Party as well as to elaborate on preliminary requirements on technological process in automatic control systems (T.P.A.C.S.). The U.S.S.R. Party will present the possibility for the U.S. Party to get acquainted with these projects in the field.

During the period of July-August 1974, the U.S. Party will prepare a list of organizations involved with production of water systems automation equipment.

The Coordinators agreed that the detailed program for the second stage (1976) would be developed during the September 1974 meeting in the U.S.S.R.

During the implementation of the second stage, it is expedient to arrange two meetings of the U.S.-U.S.S.R. Groups in 1975: the first one in September, USA to discuss and confirm the project of technical requirements on collecting, transmitting, and processing information, means and technological process control, as well as handing over the catalogs of the technical check and control means; the second one in October, U.S.S.R. to discuss and confirm the technical assignment to design the automatic reclamation systems.

Each Group should consist of four or five persons sent for a period of 14 days.

Appendix No. 4

Preliminary Program  
of the  
Visit to the U.S.S.R. of the American Delegation  
of Specialists on the Topic,  
"Methods and Means of Automation and Remote Control  
in Water Resource Systems"

Organization: Bureau of Reclamation of the Department of the Interior,  
USA

Basis: Program of Scientific and Technical Cooperation between the  
U.S.S.R. and USA on Project III.2

Number of members of delegation - 6

Purpose of the visit of the delegation - Acquaintance with the test-production project for joint research, as well as development and confirmation of proposed program on fulfilling second stage of the work on Project III.2.

The period of time will be 12 days (from 14 to 25 September 1974).

Date and day	Measures	Host organization
14 September - Saturday	Arrival in Moscow, Sheremet'evo Airport, Registration at hotel, rest.	RA-102
15 September - Sunday	Visit to the American Embassy. Get acquainted with the sights of Moscow.	
16 September - Monday	Reception of the American delegation and official presentation of the participants at the Minvodkhoz U.S.S.R. Visit to "Soyuzvodproekt" Center for design of water management projects.	V/O "Soyuzvodproekt"

Date and day	Measures	Host organization
17 September - Tuesday	Journey from Moscow to the city of Tashkent. Registration at hotel, rest.	Sredazgiprovodkhlopok, GlavSredazirsovkhozstroi
18 September - Wednesday	Visit to the Scientific Research and Design Center, "Sredazgiprovodkhlopok", SANIIRI.	GlavSredazirsovkhozstroi Sredazgiprovodkhlopok
19-20 September - Thursday and Friday	Visit to the water management projects of the Uzbek SSR. Guests of the administration of GlavSredazirsovkhozstroi.	GlavSredazirsovkhozstroi
21 September - Saturday	Journey to the city of Frunze. Free day. Seeing the sights of the city of Frunze.	VNIIKAMS
22 September - Sunday	Visit to the water management projects of the Kirghiz SSR.	Minvodkhoz Kirghiz SSR
23 September - Monday	Visit to the Scientific Center, VNIIKAMS. Meeting of the U.S.S.R. and U.S. Working Teams. Development and confirmation of proposed program for fulfilling second stage of the work in 1976. Agreement on the test- production project.	VNIIKAMS
24 September - Tuesday	Flight from Frunze to Moscow.	VNIIKAMS
25 September - Wednesday	Flight from Moscow to New York.	

Footnote: The itinerary will be revised as discussed in Denver to extend it 2 or 3 days.